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REPLACEMENT SHEET

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ligation of ssDNA

ligation of duplex DNA

(SEQ ID NO:12) CTAGTCCAAAGTGCTCGG (SEQ ID NO:13)

(SEQ ID NO:15) TGTACGCTGGATGCA $^{\mathrm{T}}$ TCATGCGACCT TCCAGCGTAC T ACGTAGGTCGCATG T^T (SEQ ID NO:15)

GATCAGGT_STTCACGAGCCTG (SEQ ID NO:14)

_T ^TGTACGCTGGATGCÁ TCCAGCGTAC T _T ŢĄCGTAGGTCGCATĠ T ^T (SEQ ID NO:16)

one pot ligation / cyclization of ssDNA

(SEQ ID NO:17) GTTTTATACAAAACCTGGCA

(SEQ ID NO:18) T(SEQ ID NO:19) T CTGCTTCACTAGT AGTGATCAAGTCCTCTGA (SEQ ID NO:20)

> $_{
> m T}$ TCAGCAAAATATGT $_{
> m s}$ TTTGGACCGTTGGT $_{
> m T}$ (SEQ ID NO:21) $^{
> m T}$ CTGCTTCACTAGT $_{
> m s}$ TCAGGAGACTGTTCA $^{
> m G}$

> > Fig. 4a

| rxn.type | conversion | isolated yield |
|----------------------|-----------------------------------|----------------|
| ssDNA ligation | >90% | 44% |
| duplex ligation | 75% | 36% |
| ligation/cyclization | >90% (1st step) 50% (2nd step) | 20% |

Fig. 4b